

Bethlehem Climate Action Plan: Public Meeting on Climate Strategies

October 7, 2020



Agenda

- Climate Action Plan background
- Recap of 1st public meeting
- How to provide input on draft climate action strategies
- Community discussion of proposed strategies
- Next steps

En español

Bethlehem wants to hear from all residents.

A Spanish translation of this presentation will be made available afterwards. We welcome input on this through the Submit an Idea form on this website:

www.BethlehemCAP.org

Una traducción al español de esta presentación va a disponible después de la reunión. Damos la bienvenida a la opinión a través del formulario "Enviar una idea" (Submit an Idea) en este sitio web: www.BethlehemCAP.org.

Welcome

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Bethlehem City Operations Climate Progress

Reducing operational costs and emissions

37% emissions reduction 2005-2017

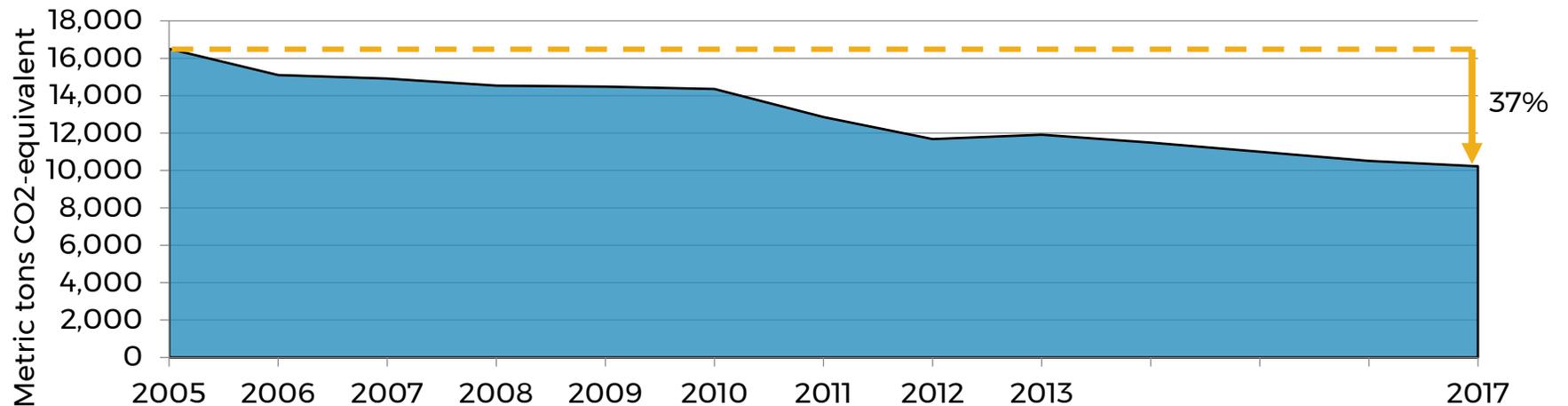
- Energy efficiency and conservation
- Water and wastewater systems upgrades
- Renewable electricity

Community-wide impacts

- Increased recycling
- South Bethlehem Greenway
- Land use and community design

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City Operations Greenhouse Gas Emissions



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CAP Development Partners



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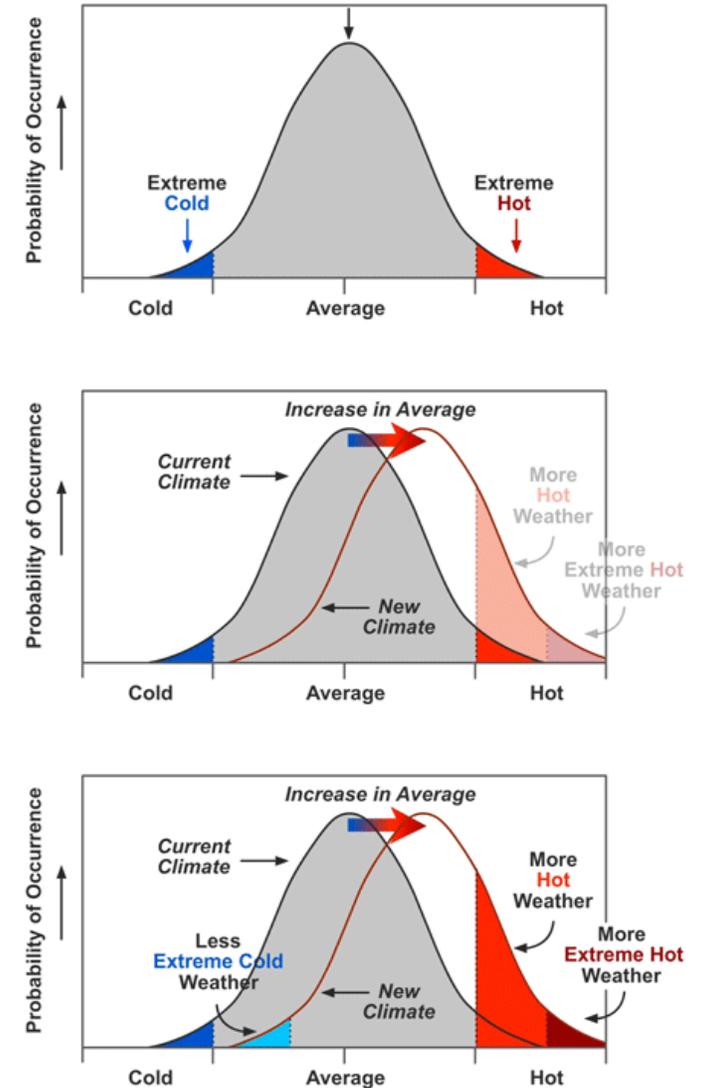
General public

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Climate vs. Weather

Climate – average conditions of a place over a long period of time

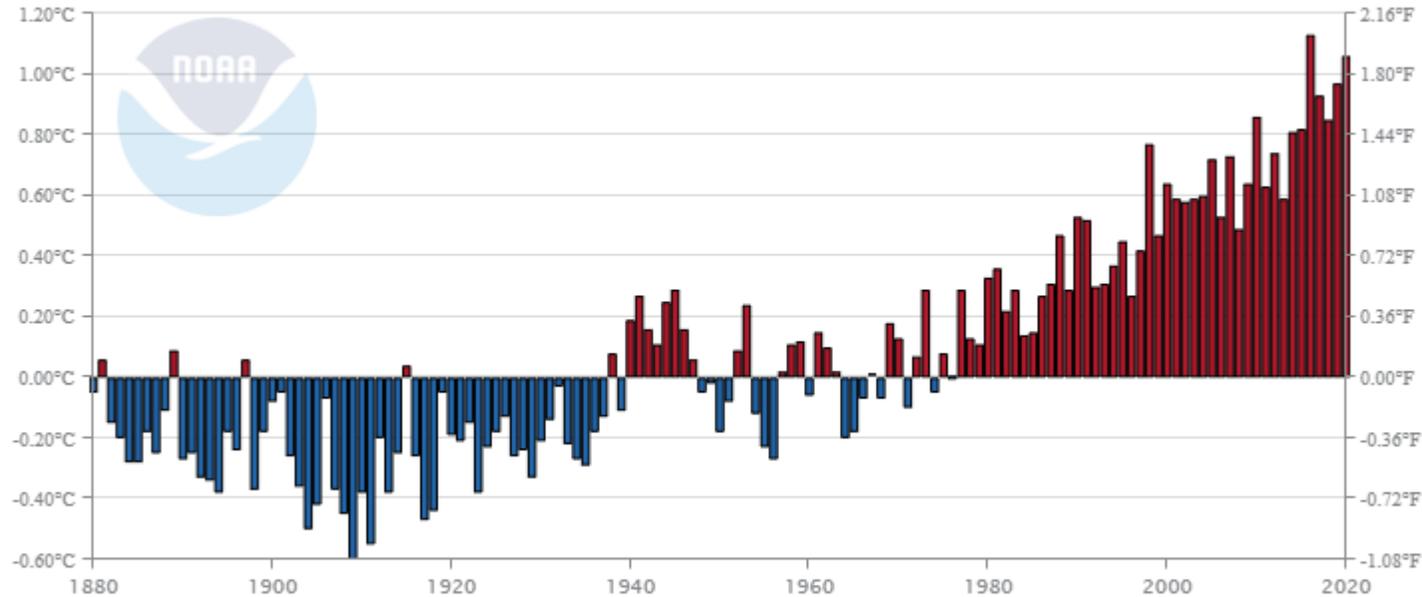
Weather – atmospheric conditions at a particular place and time



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Climate Change

Global Land and Ocean
April Temperature Anomalies



[Time Machine](#)

[Climate Explorer - Bethlehem](#)

April 2020 was 1.06°C (1.91°F) above the 20th century average of 13.7°C (56.7°F) and the second highest April temperature in the 141-year record.

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Climate Change in PA

- Temperature increased 1.8°F since last century
- By 2050 PA will be 5.4°F (3°C) warmer than 2000.
- In 2050 Philadelphia will have the climate of Richmond, VA and Pittsburgh will have Washington, DC.
- More days with temperatures over 90°F
- The average precipitation to increase by 15-20% (winter), 10-15% (spring), 0-5% (summer), and 0-5% (fall) by the late 21st century Increased risk of flooding - increased runoff leads to reduced water quality.
- Snow cover decline by 20-60% (no winter sports by mid-century).
- Increased probability that storms will be stronger with heavier rainfall.
- Non-tropical extreme rainfall events will increase.

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Impacts

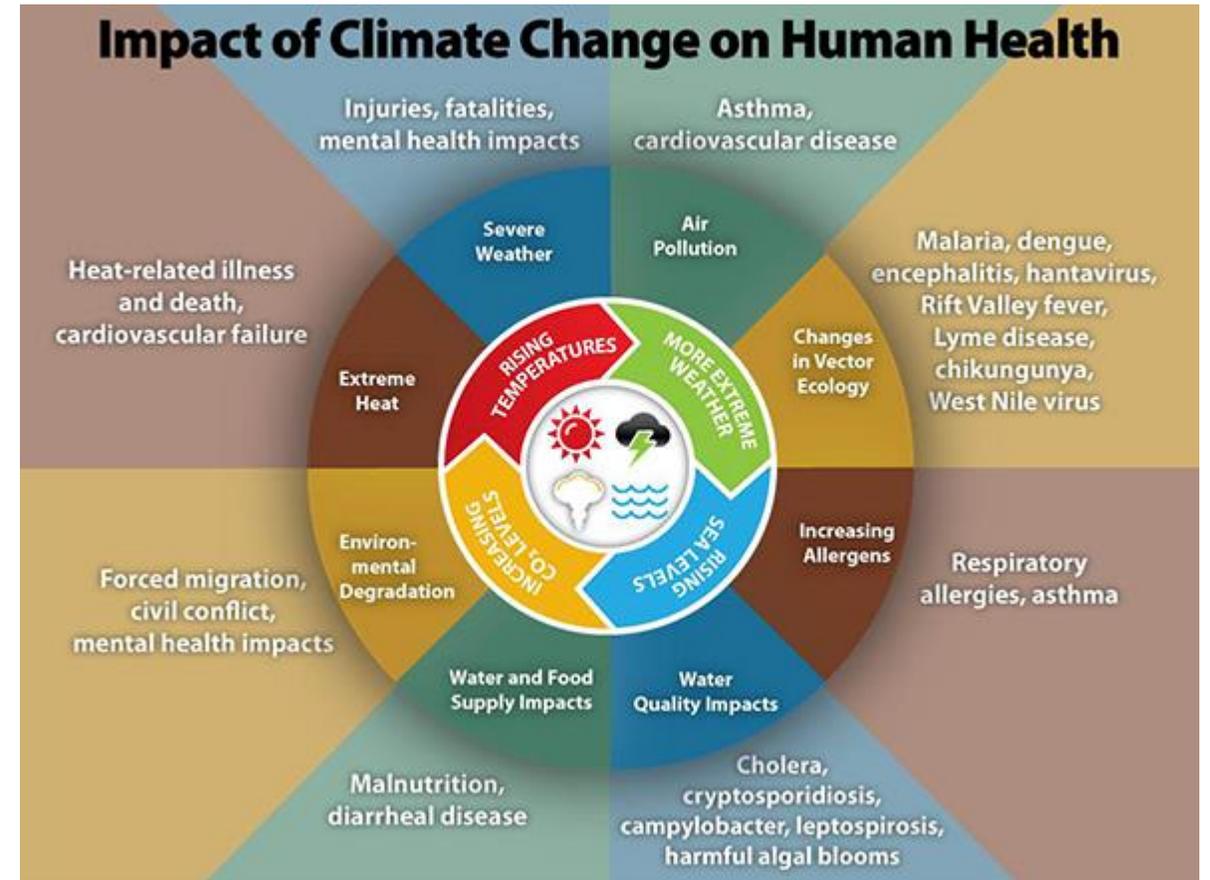
 More flooding & extreme weather events

 More heat and respiratory deaths

 Increased disease and pests

 Disruptions to agricultural systems

 Warmer, wetter weather may lead to an increase in mold and allergy-causing pollen.



<https://www.cdc.gov/climateandhealth/effects/>

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What is a Climate Action Plan (CAP)?

Bethlehem's city-wide, comprehensive roadmap to:



Reduce greenhouse gas emissions



Increase adaptation and resilience to climate change

While delivering additional benefits:



Social



Environmental



Economic

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What is in a Climate Action Plan (CAP)?

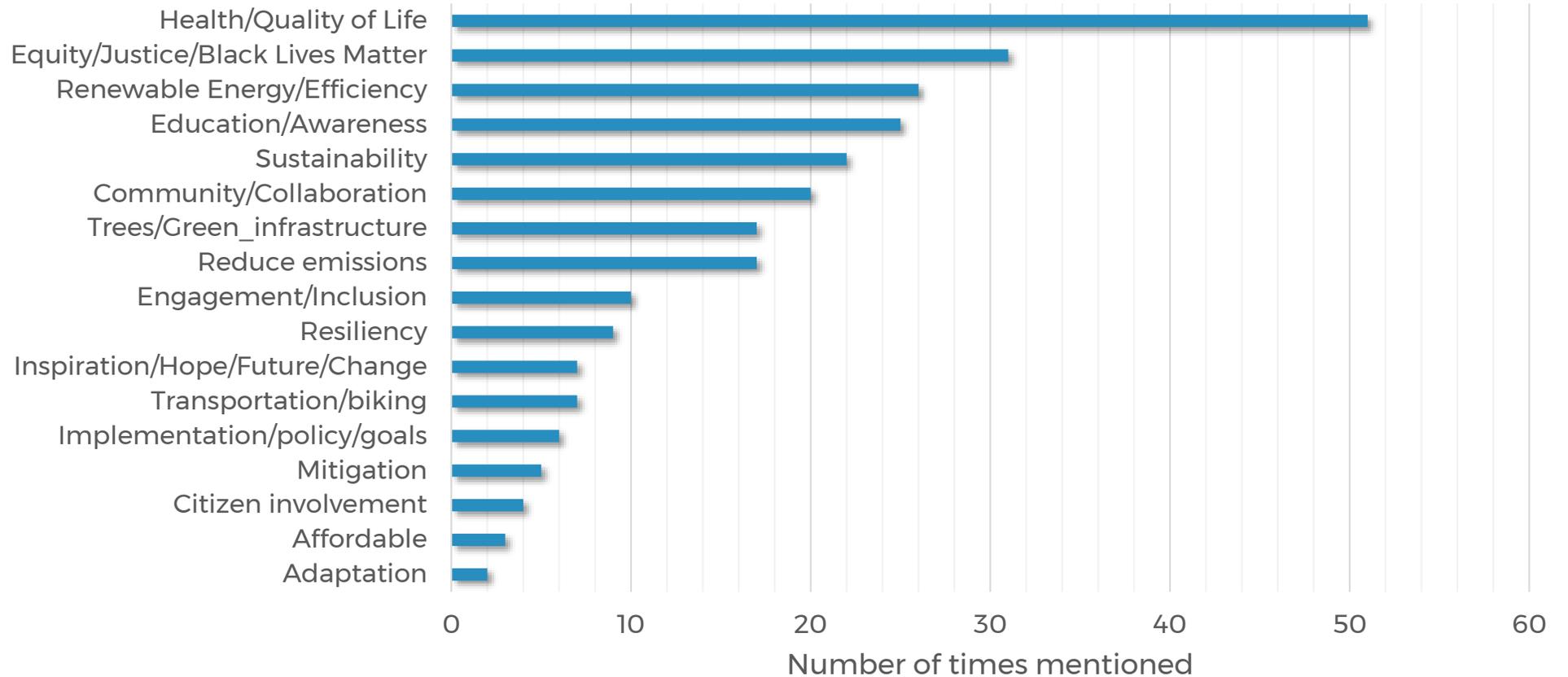
The Climate Action Plan is a roadmap. Implementation follows the release of the plan.



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Community input on CAP objectives

What do you most hope the Climate Action Plan will achieve?



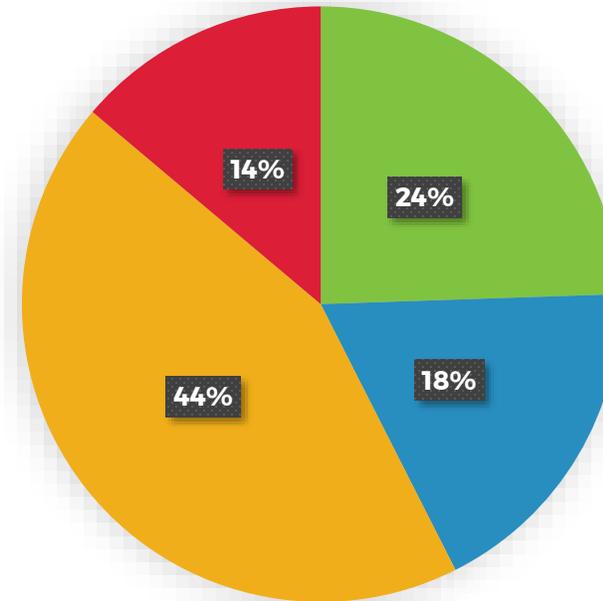
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Community input on CAP objectives

Which of the following goals do you think should guide the development and prioritization of the Climate Action Plan strategies?

1st place	Reduce GHG emissions
2nd place	Reduce local air pollution
3rd place	Improve equitable outcomes
4th place	Long-term investment and benefits
5th place	Up-front cost-effective and affordable
6th place	Promote jobs and economic opportunities
7th place	Improve resilience
8th place	Create or enhance infrastructure
9th place	Promote workforce development
10th place	Enhance accessibility
11th place	Create immediate impacts
12th place	Demonstrate Bethlehem as a leader

What approach should the city take when setting goals in the climate action plan?

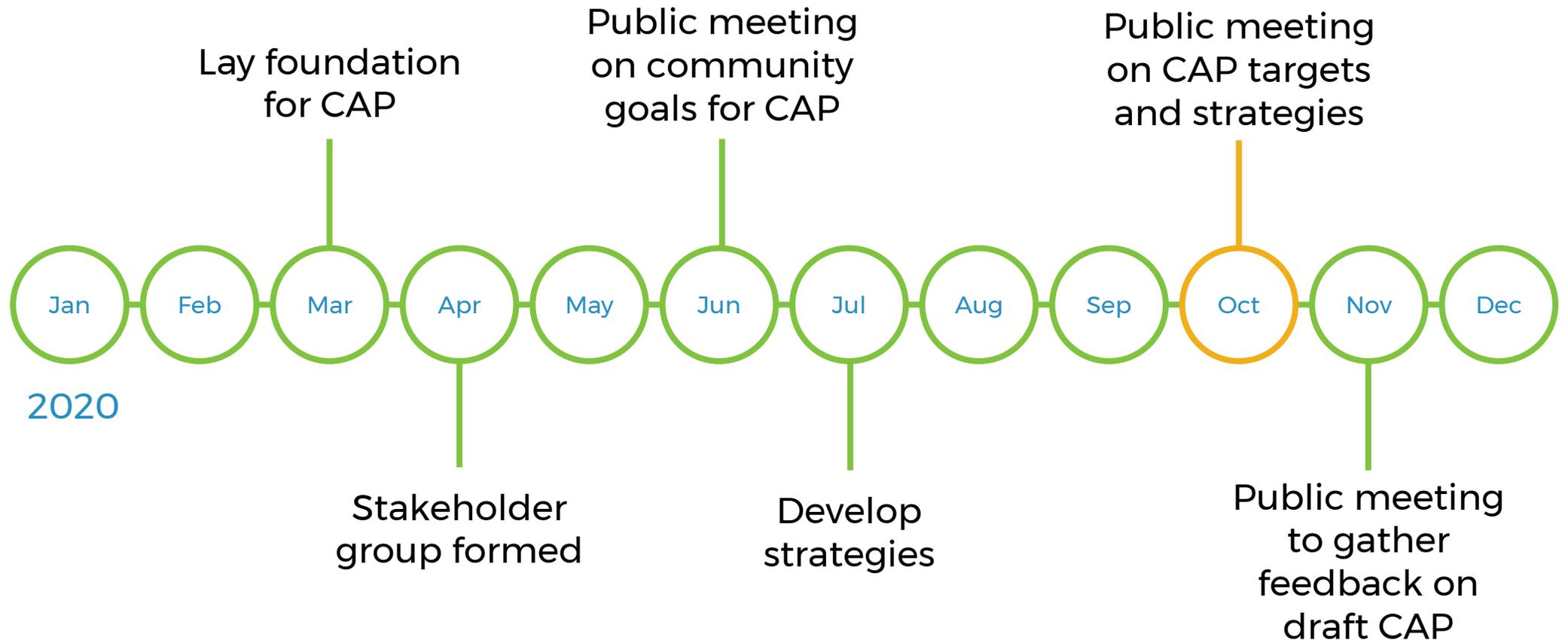


- Set aspirational goals with greater ambition, even if ability to achieve them is less certain
- Set goals with a high degree of confidence for achievement
- Set the ambition of goals based on the latest climate science
- Set the ambition of goals based on current economic or technical feasibility

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CAP Schedule and Approach

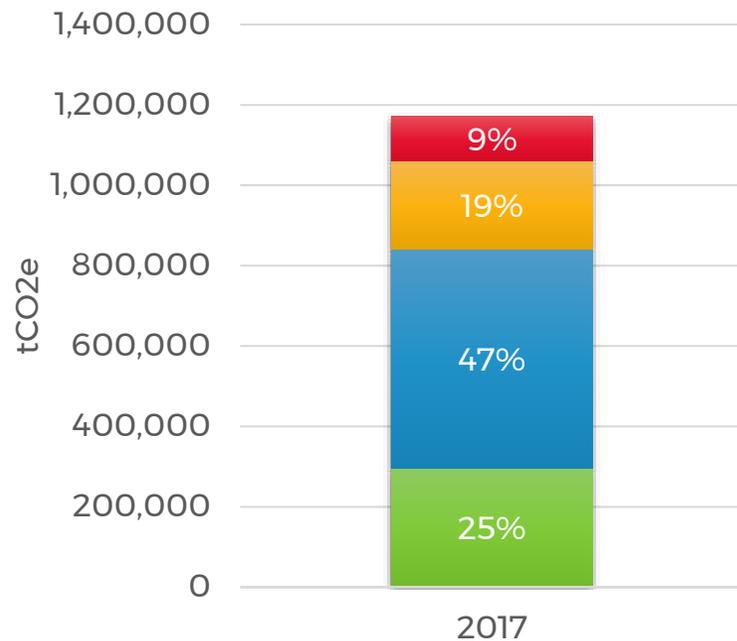
The development of the CAP consists of two phases: (1) laying the foundation, and (2) developing the plan.



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Bethlehem Community-wide GHG Inventory

The inventory serves as the baseline for the city's goals. The inventory will be refined and updated over time to measure progress.



- Waste
- Transportation
- Electricity
- Natural gas and other fuel

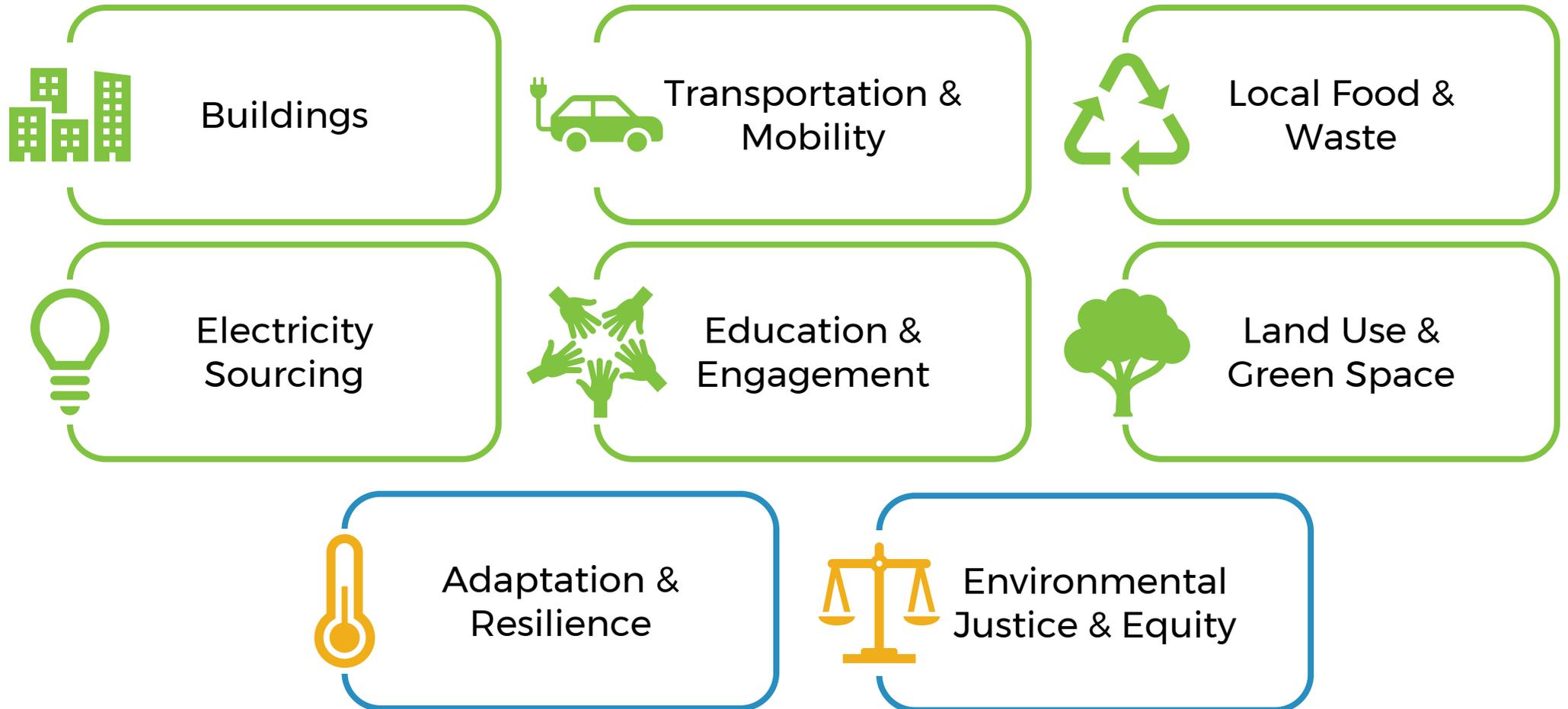
Bethlehem 2017 Community-wide GHG Emissions (tCO2e)		
<u>Natural gas and other fuel</u>	Residential	74,000
	Commercial and institutional	86,000
	Manufacturing	136,000
<u>Electricity</u>	Residential	170,000
	Commercial and institutional	249,000
	Manufacturing	126,000
<u>Transportation</u>		219,000
<u>Waste</u>		111,000
Total		1,171,000
Emissions for electricity generation in city limits		2,072,000

**Note: preliminary numbers still undergoing refinement*

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Strategy and Action Areas

Strategies will be categorized by emission-reduction sector (**green**) and to increase the city's resiliency and protect at-risk populations (**blue**).



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Options to provide input on proposed strategies



Mentimeter polls and discussion during this webinar

We will ask you to prioritize groups of strategies and then discuss



Online survey includes full list of goals and proposed strategies

Fill out online survey to rank your priorities and comment on each
Go to: Survey.BethlehemCAP.org



Community mapping of climate vulnerabilities and impacts

Identify locations of climate hazards & impacts using online map
Go to: Map.BethlehemCAP.org

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Education & Engagement

Objective



Create a 'Bethlehem Climate Challenge' program to educate about climate change, and motivate and empower residents and businesses to reduce emissions and participate in creating a resilient community

Goals



- Increase understanding of climate change impacts and the co-benefits of acting now, especially related to human health
- Engage businesses to make commitments & share best practices
- Increase resident understanding of how to make an impact, including waste management, energy efficiency, and local food
- Recognize leadership from students, residents and businesses
- Increase and incentivize stewardship of the City and its resources

Mentimeter poll:

- Go to **menti.com** and enter code **83 85 61 8**
- Alternately go directly to (provided in chat box): <https://www.menti.com/glgpta9pw4>
- If you cannot access Mentimeter, enter your response in the chat box of GoToWebinar

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Transportation and Mobility



Objective

Reduce overall transportation GHG emissions 30% by 2030



Goals

- **Reduce vehicle miles traveled**
- Decrease use of fossil transportation fuels
- Increase adoption of electric, alternative fuel, and zero-emitting vehicles
- Improve transportation data collection and tracking

Mentimeter poll:

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Local Food and Waste



Objective

Achieve zero waste by 2040



Goals

- Adopt a "reduce first" approach and minimize waste
- **Maximize waste diversion from landfills**
- Develop better tracking of Bethlehem's waste streams
- Reduce impact of waste collection and disposal system
- Enhance the local food system

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Environmental Justice & Equity

Objectives



(1) Ensure at least 40% of overall CAP benefits go to frontline communities

(2) Establish a just and ethical long-term framework for climate action supporting equity for all Bethlehem residents

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Buildings



Objective

Reduce GHG emissions from buildings by 30% by 2030



Goals

- Expand disclosure of building energy use to the public
- Decrease buildings' fuel carbon intensity
- **Increase energy efficiency of existing buildings**
- Increase energy efficiency of new buildings

Mentimeter poll:

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Adaptation & Resilience



Objective

Mitigate Bethlehem's climate-related vulnerabilities and build a more resilient city



Strategy categories

- Proactive actions to prepare for and mitigate climate impacts
- **Responses during and/or following a climate-related event**
- Monitor and maintain data on asset conditions
- Assessments/studies to understand future climate risk
- Education about future risks and how to prepare

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Green Space & Land Use

Objectives



- (1) Optimize space used for buildings and maximize opportunities and travel mode options for short daily trips
- (2) Maximize Bethlehem's urban green space and tree canopy

Goals



- Promote compact urban design with higher densities & mixed uses
- Equitably preserve and expand Bethlehem's urban tree canopy
- Improve the quality of urban ecosystems promoting biodiversity
- Increase the conversion of underutilized space to green space
- Increase equity and accessibility in Bethlehem's green space
- Improve stormwater and floodplain management

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Electricity Sourcing



Objective

Achieve 100% renewable electricity consumption by 2030



Goals

- Educate the community renewable energy and available options
- Promote use of renewable electricity
- Maximize use of on-site solar, energy storage, and other renewables
- Support policies that increase equitable access to local renewable electricity

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How to stay engaged

Visit BethlehemCAP.org for updates and details:

- Comment on proposed strategies: Survey.BethlehemCAP.org
- Document climate hazards and vulnerabilities on the CAP community map: Map.BethlehemCAP.org
- Submit an idea or ask questions via online form
- Participate in CAP public meeting planned for later this year

Get further involved:

- Follow the City of Bethlehem and Nurture Nature Center on social media for updates and ways to contribute
- Talk with your friends, family and neighbors - educate them about climate change and Bethlehem's CAP
- Discover ways you can make a difference as an individual - explore ways to save money and make your home more energy efficient, for instance
- You know your community best - be informed and speak up about your concerns and ideas!

Thank you!



City of
BETHLEHEM PA
CLIMATE ACTION PLAN